

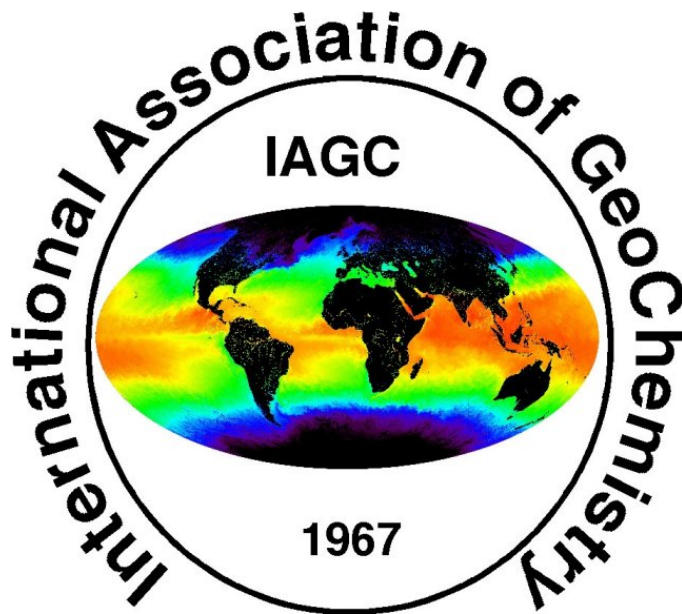
Newsletter

of the

International Association of GeoChemistry

Number 52, June 2010

Mel Gascoyne, Newsletter Editor



NEWS FROM THE ASSOCIATION

- **Recent awards**
- **New Officers & Council members**
- **Relocation of the Business Office**

ASSOCIATION NEWS

Russell Harmon, President

NEW IAGC LEADERSHIP SELECTED

The IAGC Board has selected a new Vice President and six new Council Members, all of whom will assume their duties at the conclusion of the IAGC Business Meeting to be held in Guanajuato, Mexico, during the Water-Rock XIII Symposium. Thanks to Shaun Frape and the members of the Nominations Committee for their hard work on behalf of the Association. Come August, Rich Wanty will serve a 2-year term as IAGC Vice President, followed by a 2-year term as President. The six new Council Members will serve a single 4-year term from 2010-14. Please welcome these seven members to the IAGC leadership.

Vice President

The new IAGC Vice President is **Richard B. Wanty** of the US Geological Survey. Rich received his Ph.D. degree in Geochemistry from the Colorado School of Mines and since then has been a Research Chemist for the U.S. Geological Survey in Denver, Colorado. Rich's research interests focus on low-temperature geochemistry, and he has published on topics including natural radionuclide mobility in the environment, formation of V-U deposits, environmental effects of energy extraction, mobility of metals in regions research has involved determination of metal isotope ratios, especially Fe, Cu, and Zn, and the effects of metal concentrations in the environment on aquatic biota. Rich is an Associate Editor of Applied Geochemistry and served as editor for the Proceedings of

the 11th and 12th International Symposium on Water-Rock Interaction. Rich has also served as Visiting Professor at the University of Cagliari, and Research Professor at the Colorado School of Mines.

Council Members

Professor **Ian Cartwright**, Monash University, Melbourne, Australia. Ian has been studying geochemical processes for 25 years. While much of Ian's original work was on understanding crustal fluid flow, his recent work is mainly in groundwater and surface water systems. In particular, he is using environmental stable (O, H, C, S) and radiogenic (^{222}Rn , $^{87}\text{Sr}/^{86}\text{Sr}$, ^{14}C , ^3H) isotopes together with major ion geochemistry to determine large-scale flow in aquifers, origin and evolution of solutes, groundwater mixing, and groundwater-surface water interaction. Ian oversees the Monash University Stable Isotope Facility and through that is also involved in collaborative research in palaeoclimates, diagenesis, and global element cycles.

Professor **Janet S. Herman**, University of Virginia, USA. Janet obtained her B.S. (1977) in geosciences and her Ph.D. (1982) in geochemistry, both at The Pennsylvania State University. On faculty at the University of Virginia since 1982, she is a Full Professor in the Department of Environmental Sciences specializing in the geochemistry of natural waters and the environmental fate of chemical contaminants in water resources. She is also Director of an interdepartmental group of faculty and students from Environmental Sciences, Civil Engineering, and Chemical Engineering in the Program of Interdisciplinary Research in Contaminant Hydrogeology. Her research interests are focused on the

evolution of groundwater chemistry through water-rock interactions, and she collaborates with microbial ecologists and hydrogeologists in the study of contaminated soils and aquifers. Particular interests in the interactions between surface water and groundwater apply to karst terrains and to coastal aquifers. Recent focus on emerging contaminants in water supplies has focused on the environmental fate of contaminants in agricultural watersheds as well as in urban stormwater systems. Areas of teaching include geology, hydrogeology, and geochemistry. She has published 63 peer-reviewed journal articles as well as 3 edited volumes, 26 conference proceedings, and more than 150 abstracts of presentations at professional meetings. Nine Ph.D., 20 M.S., and 15 B.S. theses were completed by her students at University of Virginia. Successful direction of women graduate students in the interdisciplinary field of contaminant hydrogeology garnered her the 1996 Presidential Award for Excellence in Mentoring in the Sciences, Mathematics, and Engineering. She was the first recipient of the University of Virginia's Excellence in Faculty Mentoring Award in 2007 in recognition of her efforts to nurture the careers of junior faculty. She was awarded the Geological Society of America Hydrogeology Division Distinguished Service Award in 2007, the Association of Women Geoscientists Outstanding Educator Award in 2008, and the Karst Waters Institute Outstanding Karst Scientist Award in 2009.

Professor **Thomas Kretzschmar**, Centro de Investigación Científica y de Educación Superior de Ensenada (CICESE), Mexico. Thomas is a hydrogeochemist in the Department of Geology at CICESE, in which he started in September of 2002. Previously he was an employee in the Autonomous University of Cd Juárez and the water

utilities (JMAS), where he used his knowledge to study the hydrochemical development and the chemical distribution of the groundwater for the local water supply. In his time in the JMAS he developed a hydrochemical model for the Boson del Hueco aquifer. Additionally, he became familiarized with the environmental needs of the region of Cd Juárez. In Baja, California, he carried out several research projects in the Rio Guadalupe watershed with the objectives of a sustainable use of the water resource and the determination of recharge behaviors in arid and semiarid environments. Up to now 6 masters students as well as a PhD student graduated so far with thesis related to hydrologic studies in Baja ,California. A second PhD student is studying at the moment the impact of extreme weather conditions in coastal watersheds in Oaxaca, SW Mexico. Several other active projects cover different environmental issues in northern Mexico. One is related to the seepage form the all American canal in Mexicali and another studies the impact of surface water runoff on groundwater in Ciudad. Juárez. Thomas is affiliated researcher and professor at the University of San Diego, where he is participation in a multidisciplinary research project regarding watershed analysis in the US Virgin Islands.

Dr. **Philippe Negrel**, *Bureau de Recherches Géologiques et Minières (BRGM)*, France.

Philippe is Head of the Isotope Geochemistry Unit and Project Leader for Isotopes in the Metrology Monitoring Analysis Department at BRGM. Since 2005, he has been chair of the expert group on "Isotope Techniques for Understanding Water Quality Impacts of Wetlands" for the International Atomic Energy Agency. His research focuses the application of isotopes in environmental studies. Specific topics of current interest include: transport and

quantification of dissolved and particulate element flux transported by rivers; the study of continental erosion; studies of wetlands and alluvial plains including surface water – groundwater interactions; Monitoring the cycle of chemical elements in the atmosphere (rain, aerosols); Study of element flux in marine environments, estuaries, coastal erosion, and the transport of solid and dissolved matter; characterization of thermal/mineral water circulation and definition of exploration methods; tracing of ground waters circulation in both crystalline and sedimentary basements (actual and palaeo).

Dr. **Martine M. Savard**, Geological Survey of Canada (GSC), Canada. Martine received her Ph.D. in 1991 from the University of Ottawa where she specialized in stable isotope geochemistry applied to the evolution of sedimentary carbonate rocks. She joined the GSC in 1990 and applied her expertise to the study of Pb-Zn carbonate-hosted deposits in Canada, Morocco and Peru. She revisited the related deposition models and proposed new methods of exploration for this type of deposit. She also contributed to the development of new exploration strategies for petroleum in Eastern Canada. She is adjunct professor at the Centre - Eau Terre Environnement, Institut National de la Recherche Scientifique (INRS-ETE) and is the head of the Delta-Lab, a stable isotope laboratory that she now dedicates to solving environmental issues. Recently, she and her team have been addressing several environmental questions such as the sustainable development of groundwater resources in Eastern Canada, and distinguishing natural and anthropogenic metal accumulations in the vicinity of Canadian smelters. She is now pursuing research on groundwater sustainable development in the context of intense agriculture. She is a co-holder

of a NSERC-CRD 5-year grant for conducting a research program on climate reconstruction using I-series isotopic in living and fossil trees. Martine has prepared over 60 articles for peer-reviewed journals and she has been a member of several grant selection committees over the years. She has received several awards for scientific communications, as well as governmental awards for her accomplishments.

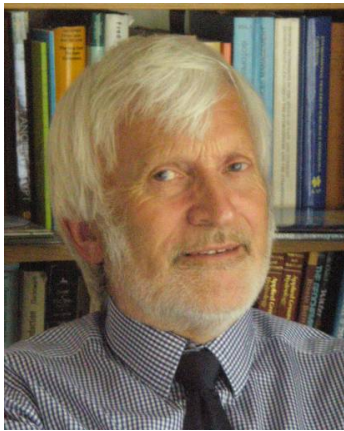
Dr. **Teodóra Szócs**, Department Head, Senior Researcher, Geological Institute of Hungary (MAFI), Hungary, Teodora is the Head of the Department of Hydrogeology. She has worked in the hydrogeochemical and modeling branch of the Hydrogeology Department. Her main research areas are the following: survey and hydrogeochemical evaluation of shallow and deep groundwater with emphasis on arsenic, water-rock interaction and hydrogeological modeling of the different flow systems including stable and radioactive isotopes. She is the national representative for Hungary in the EuroGeoSurveys' Water Resources Expert Group, whose aims are to address the European issues, to promote contribution of geosciences to EU affairs, to assist EU in obtaining technical advice and to provide a network between the geological surveys". She is a National President of the Hungarian Chapter of the International Association of Hydrogeologists, responsible for the promotion of research, and providing a forum on the management of groundwater for the benefit of environment and the society. Also, Teodora is a member of the Hungarian Water Management Council, responsible to advise the Ministry of Environment and Water on River Basin Management Planning and related issues.

IAGC AWARDS FOR 2010

The International Association of GeoChemistry is pleased to announce the following awards for 2010. A short biography for each recipient is given after the award.

IAGC Vernadsky Medal

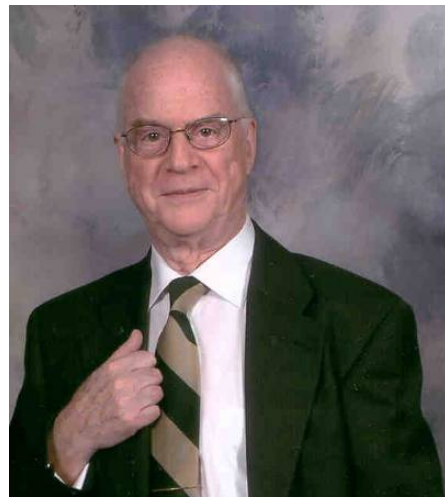
The IAGC Vernadsky Medal is awarded biennially for a distinguished record of scientific accomplishment in geochemistry over the course of a career.



Mike Edmunds
Oxford University

IAGC Fellows

The honorary title of Fellow is bestowed biennially on outstanding scientists who are IAGC members and who, over the course of some years, have made significant contributions to the field of geochemistry.



Brian Hitchon
Alberta Research Council (Retired)

IAGC Ebelmen Award

The IAGC Ebelmen Award is given to a geochemist of particular merit and outstanding promise less than 35 years old.



Qinghai Guo
China University of Geosciences



Miriam Kastner
University of California at San Diego

IAGC Distinguished Service Award

The IAGC Distinguished Service Award recognizes outstanding service by an IAGC member to the Association or to the geochemical community that greatly exceeds the normal expectations of meritorious voluntary service.



David Long
Michigan State University



Simcha Stroes-Gascoyne
Atomic Energy Canada, Ltd.



Richard Wanty
U.S. Geological Survey

IAGC Certificates of Recognition

The IAGC Certificate of Recognition is bestowed for outstanding scientific accomplishment in a particular area of geochemistry, for excellence in teaching or public service, or for service to IAGC or the international community.



Sigurdur Gislason
University of Iceland

IAGC Hitchon Award

The IAGC Hitchon Award recognizes a paper of particular merit published in the IAGC journal, *Applied Geochemistry*.

Charlet, L., Chakraborty, S., Appelo, C.A.J. Roman-Ross, B. Nath, G., Ansari, A.A., Lanson, N., Chatterjee, D., and Basu-Mallik, S., 2007, Chemodynamics of an arsenic "hotspot" in a West Bengal aquifer: A field and reactive transport modeling study: *Applied Geochemistry*, 22: 1273-1292.

Laurlet Charlet
University of Grenoble
France

Sudipta Chakraborty
University of Kalyani
India

C.A.J. Appelo
Consultant
The Netherlands

Gabriela Roman-Ross
University of Girona
Spain

Bibhash. Nath
Jadavpur University
India

G. Ansari
University of Grenoble
France

N. Lanson
University of Grenoble
France

D. Chatterjee
University of Kalyani
India

S. Basu-Mallik
Jadavpur University

India

IAGC PhD Student Research Grants

IAGC Student Research Grant program is to assist PhD students in geochemistry with undertaking and acquiring geochemical analyses in support of the student's research based upon receipt of a meritorious proposal. The recipients of an IAGC Student Research Grant for 2010 are:

G.P. Gurumurthy
Department of Civil Engineering
Manipal Institute of Technology
India

Lindsay MacKenzie
Department of Geosciences
University of Montana
USA

Cristina Puscas
Department of Geology
University of South Florida
USA

2010 IAGC AWARDS AND BIOGRAPHIES

IAGC is proud to announce the recipients of its society awards for 2010. The official announcement and presentation of the awards will occur during the 13th Symposium Water-Rock Interaction during the week of 16-20 August in Gaunajuato, Mexico. Since IAGC is an associated society of the Geological Society Denver, CO from 31 October - 3 November 2010.

The IAGC Vernadsky Medal is awarded biennially to a single person for a distinguished record of scientific accomplishment in geochemistry over the course of a career. The medalist for

2010 is **Mike Edmunds** of the UK. Mike gained his doctorate as a geochemist at the University of Liverpool researching genesis of garnet in polymetamorphic rocks. Accepting the challenge to move into the growing discipline of hydrogeology he joined the British Geological Survey in 1966 where he found a career home and established the hydrogeochemical laboratories and developed an associated research programme. Although retired from the BGS, Mike is currently Visiting Professor in Hydrogeology at OUCE (Oxford University's Centre for the Environment), where, as Research Director of The Oxford Centre for Water Research, he teaches and continues research in groundwater quality and water management, as well as working to promote links between science and policy. Mike's early research was focused on understanding water-rock interaction processes occurring in the main aquifers of the UK as well as acid rain impacts and investigation of geochemistry of geothermal areas of UK. This work also took him to Russia, Africa and the Middle East. In these areas he developed multi-tracer approaches using trace elements and environmental isotopes. Working mainly in the large sedimentary basins of Libya and the Sahara he developed a lifelong interest in semi-arid regions, where his publications have focused on recharge assessment, palaeohydrology and salinity. He has been one of the pioneers in the use of the vadose zone - to investigate recharge estimation, climate history and water-rock interaction. He has some 230 scientific publications, including 140 in externally reviewed publications in these fields. Most recently his research has included an investigation of baseline geochemistry in relation to the Water Framework Directive and another European consortium study on palaeohydrology of aquifers across

Europe. His arid and semi-arid zone studies continue to expand in Africa and most recently China. In 1999 he received the Whitaker Medal of the Geological Society of London and in 2009 the Meinzer Award of the Geological Society of America for his achievements in these fields. Mike was a founder member of IAGC's Water-Rock Interaction Group and its Chairman from 1986-1997. His international career includes work with IAEA and UNESCO as well as NGOs in the promotion of geochemical studies for groundwater improvement in developing countries.

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The IAGC Ebelmen Award is given biennially to a geochemist of particular merit and outstanding promise less than 35 years old at the time of nomination. The 2010 recipient of this award is **Qinghai Guo**, who holds a PhD degree from China University of Geosciences (CUG) and currently is an Associate Professor at CUG His research interests are in geochemistry of high-temperature geothermal fluid and naturally poor-quality groundwater (especially high fluoride groundwater). In 2004, he received the Excellent Graduate Fellowship (2004) by Chinese Academy of Sciences, his doctoral dissertation was appraised as the Best PhD Thesis in Hubei Province of China during 2006, and , he was awarded the First-Class Prize in Sciences by the government of Hubei province of China in 2009. In recent years, Qinghai's research work has been financially supported by National Natural Science Foundation of China and Ministry of Science and Technology of China. Presently Qinghai is a visiting researcher at University of Waterloo, Canada and will return to CUG after a 1-year stay in Waterloo.

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The IAGC Distinguished Service Award is bestowed on **David Long** of the Michigan State University for service by an IAGC member to the Association or to the geochemical community that greatly exceeds the normal expectations of voluntary service. Dave received his PhD degree from the University of Kansas and does research and teaching in the areas of aqueous and environmental geochemistry in the Department of Geological Sciences at MSU, where he also holds appointments in the Department of Civil and Environmental Engineering, Institute for International Health, Center for Environmental Toxicology, the Center for Water Research, and the Global Institute for Higher Education. He has been studying elemental, trace metals, dissolved organics cycling and their interactions in surface environments (e.g., wetlands, watersheds, groundwater); understanding the biogeochemical evolution of water using stable isotopes, multivariate statistics, and geochemical modeling; evaluating the influences of human activities on environment systems using sediment chronologies; and evaluating the influences of the environment on human health through exposure analysis (e.g., the etiology of Balkan Endemic Nephropathy). Dave's international experiences include teaching and research activities in Australia, Bulgaria, Croatia, Israel, Kenya, Macedonia, Malawi, Serbia, and Romania.

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The honorary title of IAGC Fellow is bestowed on **Brian Hitchon**, who is retired from a career with the Alberta Research Council, and **Miriam Kastner** of the University of California at San Diego.

The honorary title of IAGC Fellow for 2010 is bestowed on **Brian Hitchon**, who is retired from a career with the Alberta Research Council, and **Miriam Kastner** of the University of California at San Diego.

Brian was born in St. John, New Brunswick, Canada in 1930 and educated in England, receiving his Ph.D. from Manchester University in 1955. After two years as a geologist with the Northern Rhodesia Geological Survey he returned to Canada in 1957 and joined the Alberta Research Council in Edmonton, Alberta. He has held many positions in Council including Research Fellow, Vice-President for Facilities and Acting Director to (currently) emeritus. He retired in 1989 and started Hitchon Geochemical Services Ltd., a consultancy, and in 1995 branched out into publishing with Geoscience Publishing Ltd., which currently has five titles, with more planned. The fourth book, Alberta Beneath Our Feet, was winner of the 2006 Association of Earth Science Editors Outstanding Publication in the Print Category. He was active in IAGC affairs for two decades, first as Chairman of the IAGC Working Group on Water-Rock Interaction (1974–1983), then Secretary of IAGC (1984–1992), as well as Executive Editor of the journal Applied Geochemistry (1986–1993). He has specialized in the geochemistry and flow of formation waters in sedimentary basins with more than 85 publications,

the majority in refereed journals, in addition to 27 bulletins and reports of the two organizations he has worked for and 23 consultant reports for both Council and Hitchon Geochemical Services Ltd. His other interests include things Japanese (gardens, architecture, food), eclectic reading (biography, medieval history, natural history, travel (especially Africa), mystery novels), natural history and travel (worldwide), gardening, classical music (especially piano), and English language and literature.

Miriam Earned a PhD in the geosciences in 1970 from Harvard University and today is a Distinguished Professor of Earth Sciences in the Graduate Department of Scripps Institution of Oceanography at the University of California, San Diego. Her expertise is in marine geochemistry and her research focuses on chemical paleoceanography, the role and fluxes of fluids in convergent plate margins, the origin, environmental implications, and diagenesis of primarily marine authigenic minerals (i.e. phosphates, sulfates, silicates, carbonates), gas hydrates in continental margins and implications for climate change and slope stability, and submarine hydrothermal deposits. Miriam has published more than 160 papers in refereed journals that address such subjects as gas hydrates, fluid-rock interactions and flow paths, chemical paleoceanography and diagenetic problems, oceanic minerals, and hydrothermal deposits. She has sailed as scientist or Chief Scientist on numerous ocean expeditions, including expeditions involving the use of submersibles (Alvin, Nautile, Johnson SeaLink, Ventana), ROV's (MBARI) and was involved in a variety of water-

column and seafloor sampling/coring and monitoring equipment development and usage. Miriam is a Fellow of: AGU, Geochemical Society, GSA, and AAAS. Among the awards Miriam has received include a Guggenheim Fellowship, a Doctor of Science (Honoris Causa) from the University of Paris XI, France, the Office of Naval Research Ocean Science Educators Award, and the Ewing Medal American geophysical Union.

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The IAGC Certificate of Recognition is awarded (i) to any scientist for outstanding scientific accomplishment in a particular area of geochemistry, (ii) to other geochemists for excellence in teaching or public service, or (iii) to an IAGC member for meritorious service to the Association or the international geochemistry community. The recipients for 2010 are: **Sigurdur Gislason** (University of Iceland), **Simcha Stroes-Gascoyne** (Atomic Energy Canada, Ltd.), and **Richard B. Wanty** (US Geological Survey)

Sigurdur Gislason Sigurður Reynir Gislason is a research professor and chairman of the aquatic geochemistry group at the University of Iceland's Institute of Earth Sciences, where he studies water/rock, water/air and water/biomass interactions by field and laboratory experimental studies. Siggí was educated at the University of Iceland and at the Johns Hopkins University, U.S.A. where he earned his Ph.D. in geochemistry in 1985. He currently serves on the editorial board of *Chemical Geology*, the journal of the European Association of Geochemistry, has been a member of the Association's board of directors, and chairs Geochemistry of the Earth Surface (GES), a working group of the International Association of GeoChemistry. He is the chairman of the Scientific Steering Committee for the carbon sequestering in basaltic rocks

initiative; *Carb-Fix*. Saggi was cited for “for insightful research on basalt weathering and its importance in the long-term carbon cycle and for service to IAGC as Leader of the IAGC Working Group on Geochemistry of the Earth’s Surface.”

Simcha Stroes-Gascoyne holds a PhD in Civil Engineering from McMaster University, Hamilton ON, Canada, and Bachelor and Master’s degrees in Environmental Engineering from the Agricultural University of Wageningen, the Netherlands. Sim holds the position of Senior Research Scientist at Atomic Energy of Canada Limited (AECL) in Pinawa MB, Canada, where she has been working on the disposal of high level nuclear waste since 1982. Initially her work was focused on mechanisms of spent fuel (UO₂) dissolution, but since the mid 1990’s her interest has shifted to subsurface microbiology in the context of nuclear waste disposal. Sim is the author of over a hundred published articles, conference proceedings and reports. Sim was cited for “innovative research on microbiology related to nuclear waste disposal and unselfish service to IAGC.”

As noted above, Rich Wanty received his Ph.D. degree in Geochemistry from the Colorado School of Mines and since then has been a Research Chemist for the U.S. Geological Survey in Denver, Colorado. Rich was cited for “many years of dedicated and distinguished service to IAGC, especially to the Working Group on Water-Rock Interaction.”

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The Hitchon Award for the most significant recent paper published in the IAGC journal, *Applied Geochemistry*, is awarded to Laurlet Charlet (University of Grenoble, France), Sudipta Chakraborty (University of Kalyani, India), C.A.J. Appelo (The

Netherlands), Gabriela Roman-Ross (University of Girona, Spain), Bibhash. Nath (Jadavpur University, India), G. Ansari and N. Lanson (University of Grenoble, France), D. Chatterjee (University of Kalyani, India), and S. Basu-Mallik (Jadavpur University, India) for the paper:

Charlet, L., Chakraborty, S., Appelo, C.A.J. Roman-Ross, B. Nath, G., Ansari, A.A., Lanson, N., Chatterjee, D., and Basu-Mallik, S., 2007, Chemodynamics of an arsenic “hotspot” in a West Bengal aquifer: A field and reactive transport modeling study: *Applied Geochemistry*, 22: 1273-1292.

2010 IAGC STUDENT RESEARCH GRANTS ANNOUNCED

For 2010, IAGC will make three Student Research Grant awards.

Kristina Puscas of the University of South Florida (USA) receives a grant of \$2500(US) in support of her PhD dissertation project "Hypogene Caves Along the Cerna Valley Romania."

Lindsay MacKenzie of the University of Montana (USA) receives a grant of \$1000(US) in support of her dissertation research "Using Geochemistry and Sedimentology to Determine the Taphonomy of the Chengjiang Biota, Yuanshan Formation, Yunnan Province, China."

G. P. Gurumurthy of the Mainipal Institute of Technology (India) receives a grant of \$500 (US) in support of his dissertation research "Major Ion, Trace Element, and Organic Carbon Geochemistry of the Nethravathi River, Southwest Coast of India."

MEETINGS IN 2010

IAGC Business Meetings

Two IAGC business meetings are scheduled during this year:

- (i) The first will be an 'informal' business meeting held during the June Goldschmidt Conference in Knoxville, TN at a time and place to be announced by Tom Bullen. Please let Tom know (tdbullen@usgs.gov) if you're planning to attend the Goldschmidt Conference and then make sure to come to the meeting.
- (ii) The second will be the 'official' business meeting held in August during the WRI-13 meeting in Guanajuato. Please let me know

(rsharmon@ncsu.edu) if you will be able to participate in the Guanajuato business meeting. The new IAGC Officers and Council Members will be installed at this meeting. Both business meetings will have the same agenda, and the results from the Knoxville meeting will feed into the Guanajuato meeting.

(iii) It is likely that an informal business meeting will be held in conjunction with the 2010 Geological Society of America Meeting, scheduled to be held in Denver, CO, from 31 Oct - 3 Nov.

GEOLOGICAL SOCIETY OF AMERICA 2010 ANNUAL MEETING

IAGC will continue its presence and involvement in the Geological Society of America Annual Meeting, to be held in Denver, CO from 31 October - 3 November 2010. IAGC will sponsor five technical theme sessions at this international conference, as described below. IAGC members are encouraged to support these sessions through the submission of an oral or poster presentation. The deadline for abstract submission is 6 August. Details can be found on the Geological Society of America web site: <http://www.geosociety.org/meetings/2010/techprog.htm>. Thanks on behalf of the Association are extended to the IAGC members for this important community service.

Session T16. *Geochemical and Isotopic Evolution of Sedimentary and Crystalline Formation Brines* co-chaired by IAGC Members Orfan Shouakar-Stash, Randy L. Stotler.

Description: Although formation brines have been extensively investigated, evolutionary pathways are still disputed. This session will explore new findings and evaluate different evolutionary pathways for brines based on geochemical and isotopic evidence.

Session T37. *Environmental Geochemistry for Modern Mining* co-chaired by IAGC Members Robert R. Seal and LeeAnn Munk

Description: This session encourages contributions on baseline characterization, geochemical characteristics of mine wastes, ecological and human health effects associated with mine waste and drainage, pit lake geochemistry, and case studies.

Session T51. *Neutral Mine Drainage: Release, Transport, and Attenuation of Metals and Trace Elements in Circumneutral Mining Environments* co-chaired by IAGC Member Matthew B.J. Lindsay, David W. Blowes, and IAGC Member D. Kirk Nordstrom

Description: This session will center on the geochemistry, mineralogy and microbiology of metals and trace elements in mining-impacted environments characterized by circumneutral-pH conditions. Topics may range from mine waste characterization to down-gradient transport and attenuation processes.

T62. *Geochemical Behavior and Reactivity of Nanostructures in Natural Systems* co-chaired by IAGC Member Russell S. Harmon and Huifang Xu.

Description: This session will focus on understanding geochemical reactions and mass transfers at nanometer scales, especially the formation of nanostructures (e.g. particles, films, and pores) in geologic materials and their effects on geochemical processes.

T63. *Sources, Transport, and Fate of Trace and Toxic Elements in the Environment* co-chaired by IAGC Members LeeAnn Munk, David T. Long, and W. Berry Lyons

Description: Relevant research dealing with trace and potentially toxic elements in the environment. Basic and applied research topics on trace elements in water, sediment, and rocks that relate to sources, transport and fate are encouraged.

**The 9th International Symposium on the Geochemistry of the Earth's Surface (GES-9)
3-7 June 2011, University of Colorado at Boulder**

The Ninth International Symposium on the Geochemistry of the Earth's Surface continues a triennial series begun 25 years ago by the Geochemistry of the Earth's Surface (GES) working group of the International Association of GeoChemistry (IAGC). These symposia cover the geochemistry of rock, water, air and life on the surface of the Earth, in both natural and perturbed systems. The 2011 meeting theme—**Geochemical Landscapes in the Anthropocene**—highlights human participation, both passive and active, in geochemical systems. The meeting will also serve as a gathering point for researchers interested in Critical Zone science. The University of Colorado campus is a leader in environmental research, and is renowned for its beautiful setting at the foot of the Colorado Front Range.

The meeting format is intended to foster scientific growth and dialogue. Invited speakers will give in-depth talks on conference themes in daily plenary sessions. Conference delegates will bring posters to stimulate discussion during focused poster sessions. A half-day mid-conference break can be used to explore the local environment on your own, or to take an optional **field trip** to the Boulder Creek Critical Zone Observatory (<http://czo.colorado.edu/>) or to Rocky Mountain National Park. These trips will take participants into the Colorado Front Range and will emphasize research on weathering and biogeochemistry.

GES-9 Conference themes

- Microbial Geochemistry
- Environmental Geochemistry

- Organic Contaminants
- Critical Zone Processes
- Rivers as Landscape Integrators
- Global Geochemical Cycles

Invited Speakers- Preliminary

Kyungsoo Yoo (U Minnesota, USA), Sue Brantley (Penn State U, USA), François Chabaux (U Strasbourg, France), Kristin Schirmer (EAWAG, Switzerland), Fred Mackenzie (U Hawai'i, USA), Jérôme Gaillardet (IPGP, France), Baerbel Hönlisch (Lamont Doherty, USA), Niels Hovius (Cambridge, England), Derek Vance (Bristol, England), Eric Oelkers (Toulouse, France), Eric Sundquist (US Geological Survey, USA), Mark Hodson (U Reading, England), Nikolaos P. Nikolaidis (Tech. Univ. of Crete), Jane Plant (Imperial College, England), Thomas Hofstetter (EAWAG, Switzerland), Herbert Buxton (U.S. Geological Survey, USA), Jean-Dominique Meunier (CNRS, Aix-en-Provence, France).

GES9 Schedule

June 2010—Website opens
 October 2010—Registration opens
 February 2011—Deadline for booking accommodations
 February 2011—Deadline for early registration and abstract submission
 April 2011—Deadline for standard registration
 June 1-2, 2011 — International Critical Zone students symposium (proposed)
 June 3-7, 2011—GES-9 Symposium

Abstract submission and registration

Abstract submission and registration will be done through the conference website starting November 2010.

Organizing Committee

Secretary General: Suzanne Anderson (University of Colorado, USA)

Scientific Program: Steve Banwart (University of Sheffield, UK), Marty Goldhaber (US Geological Survey, Colorado, USA), Jérôme Gaillardet (IPGP, France), Sigurdur Gíslason (Science Institute, Iceland), Stefano Bernasconi (ETH, Switzerland), Alexis Templeton (University of Colorado, USA), Liane Bening (Leeds, UK), Vala Ragnarsdottir (University of Iceland), David Clow (US Geological Survey, Colorado, USA).

Contact Information

Suzanne Anderson, INSTAAR and Dept. of Geography, University of Colorado, Boulder, CO 80309, e-mail: Suzanne.anderson@colorado.edu

<http://instaar.colorado.edu/GES-9/>

CALL FOR IAGC 2011 AWARD NOMINATIONS

It will soon be time to start thinking about who you might want to nominate for an IAGC 2011 award. The window of opportunity for nomination submission will extend from 15 September through 15 November. Awards to be bestowed in 2011 are the *IAGC Distinguished Service Award*, *IAGC Fellow*, and *IAGC Certificate of Recognition*. Nominations should be sent by e-mail to IAGC Secretary Tom Bullen (tdbullen@usgs.gov). Please note that no current IAGC Officer, Council Member, Standing Committee Member, Working Group Leader, the Journal Executive Editor, or Business Office Manager may be nominated for any IAGC award.

Nominations for the *Distinguished Service Award* shall consist of an e-mail nomination not more than one page in length from any IAGC member in good standing that describes why the nominee is deserving of the award. This nomination should also contain the suggested citation text.

Nominations for *IAGC Fellow* shall consist of an e-mail of nomination of one paragraph from any IAGC member in good standing that describes why the nominee is deserving of this special honor. This nomination should also contain the suggested citation text.

Nominations for *IAGC Certificate of Recognition* shall consist of an e-mail of nomination of a single short paragraph in length that explains why the nominee is deserving of IAGC recognition as follows: (i) to any scientist for outstanding scientific accomplishment in a particular area of geochemistry, (ii) to other geochemists for excellence in teaching or public service, or (iii) to an IAGC member for meritorious service to the Association or the international geochemistry community.

CALL FOR IAGC 2011 PHD STUDENT RESEARCH GRANT APPLICATIONS

Up to three IAGC Student Research Grants may be awarded annually, based upon receipt of deserving proposals sent by e-mail to the IAGC Secretary prior to 30 November 2010. The objective of the IAGC Student Research Grant program is to assist PhD students in geochemistry with undertaking and acquiring geochemical data and analyses in support of the student's Dissertation research. IAGC Student Research Award consist of a grant of up to \$3000 (US) to support

the analytical and data acquisition needs of a geochemistry PhD student and a 1-year membership to IAGC for the year following receipt of the award. The proposal form, which must be completed in full and signed by the PhD student's research advisor, is available on the IAGC web site (<http://www.iagc.ca/>).

MEDICAL GEOLOGY IN SOUTH AMERICA

(Clemens Reimann)

Over the last few years, a series of Hemispheric Conferences on Medical Geology (HCMedGeo) has been initiated in South America. As a result of growing grass-roots interest in Medical Geology, local specialists and enthusiasts were keen to establish this conference series and have held three very successful meetings. The aim of these meetings was to encourage international scientific collaboration between medical geology researchers by bringing together scientists from South America, Central and North America, Canada, and the Caribbean Basin to share the most recent advances and latest information on Medical Geology research with particular emphasis on environmental and health problems afflicting that part of the globe. IMGA has supported these conferences by running Medical Geology Courses in conjunction with them etc.

The 1st HCMedGeo was organized in 2005 in Puerto Rico with participation from over 50 delegates and with representation from each of the regions. The 2nd HCMedGeo was held in Atibaia, Brazil in 2007 with over 150 participants bringing together a wide range of disciplines in geosciences and biomedical research with particular interest on Medical Geology. The 3rd HCMedGeo was held in Uruguay in October 2009 and was timed to precede

the 8th ISEG Conference in Brazil. The 3rd HMedGeo attracted approximately 150 participants from 30 countries world-wide and was a very successful meeting. As a result of the success and international nature of the 3rd Conference, the conference series is now broadening to be an international meeting, not just to focus on South America.

Therefore the 4th International Conference on Medical Geology (GeoMed2011) will be held 20-25th September 2011 in Bari, Italy. This meeting is being organised by Prof Saverio Fiore, Institute of Methodologies for Environmental Analysis- CNR (National Research Council), Italy. Organisation of the meeting is progressing excellently and the web-site and advertising for the conference are already up and running:

<http://www.geomed2011.it/>

Proposed sessions include topics of mutual interest to IAGC as well as IMGA:

- Air, Soil & Water Pollution & Quality
- Minerals & Environment
- Environmental Toxicology & Epidemiology
- Biominerals & Biomaterials
- Risk Assessment & Communication in Medical Geology"

RELOCATION OF THE IAGC BUSINESS OFFICE

After eighteen years of exemplary service, Mel Gascoyne has decided that it is time to step down as IAGC Business Office Manager. Many members have met Mel in professional context or manning the IAGC booth at the annual GSA meeting. So, on behalf of a grateful membership, the Association extends its most sincere and heartfelt thanks to Mel for all of the work he has done on its behalf of the Association during this time. During August 2010, the IAGC Business Office will relocate to Columbus, OH where it will operate in the same physical location as the Treasurer. The Executive commenced a search to hire a new Business Office Manager in

December 2009. Contact information for the new Business Office and details about how it will operate will be provided to the IAGC membership as soon after the relocation as possible.

Applied Geochemistry – Are you missing any issues?

The IAGC Business Office is willing to mail out missing issues of AG, volumes 17, 18, 19, 20, 21 & 23 to fill in the gaps of members' collections, free of charge! Let us know if you are missing an issue.

How to Contact Us:

To join or renew your IAGC membership, subscribe to or track down errant issues of *Applied Geochemistry* or *Elements*, or to send in comments, etc., contact:
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